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ABSTRACT

As part of a study conducted to develop an appropriate methodology for evaluating its vocational curriculum, Miami-Dade Community College (M-DCC) asked selected students, faculty, and employers to rate the effectiveness of the college in preparing students for accounting, electronics, and broadcasting technology careers. The study involved the preparation of a list of desired competencies for each of these vocational areas and the incorporation of these lists on three survey instruments. Students, faculty, and employers in each vocational area were asked to indicate, on a five-part Likert scale, the adequacy with which the M-DCC curriculum addressed each occupational competency. Survey findings, based on responses from 150 students, 16 faculty members, and 16 employers, had only limited research significance due to the unwillingness of many employers to respond and the fact that current students, rather than employed graduates, were included in the survey because of time and cost limitations. Yet, the survey methodology itself proved valuable, in that it provided a basis for comparing the perceptions of students, instructors, and employers on the same set of questions. The study report presents a series of tables illustrating item-by-item responses and includes the competency lists developed for each vocational area. (JP)

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ED194148

A PILOT STUDY DESIGNED TO EXPLORE A METHOD TO EVALUATE ON-THE-JOB PERFORMANCE OF SELECTED ASSOCIATE IN SCIENCE DEGREE GRADUATES

Research Report 79-83

November 1979

John Losak
Bill Cael

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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MIAMI-DADE COMMUNITY COLLEGE

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Placement and Follow-up Study

JC 800 578

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Acknowledgments

This research project was supported by the Division of Vocational Education and the Division of Community Colleges. The majority of the work involving contact with the employers, and the organization of the results was carried out by Bill Cael.

The committee members, five from the programs and three from the support area were:

Francis Hogan - Accounting
Joseph Kreutle - Accounting

John Kern - Radio-Television Broadcasting Technology

Bill Jones - Electronics Technology
Gerald Schickman - Electronics Technology

George Bergen - English
Brad Lawrence - Mathematics/Physics
Jerry Sicard - Behavioral Sciences

The committee worked intently to derive competencies which could be reasonablyassessed by students, faculty, and employers. The program representatives were also responsible for the administration of the questions to students and to faculty.

In short, this project could not have been carried out without the cooperation and work provided by the committee. We are hopeful that the contributions of this pilot study will eventually benefit students and we will continue to work toward that end.

John Losak, Project Director
November 1979

Introduction

The placement and follow-up of students who have enrolled at two-year colleges in occupational/technical programs is of continuing importance to educators. From the large number of research questions applicable to this wide-ranging concern, the focus of this project was on the issue of whether students, faculty, and employers believe that the students were adequately prepared by Miami-Dade to perform the job for which they were being trained. A concomitant purpose of the project (which should be viewed as essentially a pilot project) was to refine the processes by which appropriate empirical data can be gathered to address the question.

More specifically, the purpose of this project was to follow-up on graduates from three selected occupational programs at Miami-Dade Community College, North Campus, in order to determine their views of the curriculum, the views held by their current employers with regard to the preparation that graduates from these programs demonstrate, and the views held by instructors regarding the relationship between educational preparation and the relatedness of this preparation to job performance.

Methodology

A request for support to conduct the pilot study was initiated in October of 1978; an award was made in early November. It is important with regard to understanding the design of this study to note that completion of this study was expected at the end of June, 1979. Such time constraints prohibited the gathering of longitudinal data and impacted in several other important research design considerations.

Following receipt of the grant, meetings were begun with the project director, the associate project director, the chairpersons of mathematics, English, and Behavioral Sciences on North Campus, along with the assigned persons for each of the areasof Accounting, Radio-Television Broadcasting Technology and Electronics Technology. The purpose of the meetings was to establish the most efficacious manner of carrying out the research project, given the constraints of time and money.

Each chairperson developed competencies thought to be appropriate for persons graduating from a particular program. The resource persons from the departments of Mathematics, English, and Behavioral Sciences were asked to draw up appropriate competencies thought to be important for graduates of occupational programs, while program persons were asked to draw up competencies related to each particular program. The discussions following the development of each of these lists focused on a merging of the competencies to a workable and usable and meaningful array of integrated competencies which could be reasonably identified by students, faculty, and employers.

It was believed by the committee that an important component of the research design would be to ask the three separate groups of persons - students, faculty, employers - whether they thought the competencies were being adequately addressed.

In order to facilitate the process of writing objectives and understanding the relationships between and among the views of students, faculty, and employers on the nature of stated competencies, a series of workshops was attended by the committee. These workshops were arranged by the State and presented by CAEL. (This acronym was designed to abbreviate the Council for Advancement of Experiential Learning but has since become known simply as CAEL.) These meetings were attended by representatives of each of the colleges awarded monies under these grants during the period January through April. The meetings were held in various locations in Florida.

It became soon apparent that in order to meet the reporting deadline which was established (the deadline for reporting was not changed until well after the research design and operations had gotten underway) that it would not be possible to ask students who were already on the job to be participants in this study. Rather, it was decided to ask students who were at or near the point of graduation from each of the programs to express their views on the extent to which the objectives established by faculty were met in

their curriculum experiences. It was decided to ask the same questions of faculty and, in effect, to ask virtually the same questions of employers. By using the same questions, it was believed that the different perspectives could provide the most valid information in the shortest period of time regarding the issues.

Each of the persons on the committee representing the programs identified six major employers of graduates of the three project programs to receive an instrument by which graduates could be evaluated in relation to the established competencies.

The list of competencies was developed and administrations to students and faculty were conducted in the latter part of April 1979. Contact was begun with employers at the same time but extreme difficulty was encountered in obtaining responses. Despite the best efforts to reassure employers that there were no violations of the federal privacy laws involved in any aspect of this program, there was pronounced reluctance to respond to any questions. It was not until the end of August that sufficient responses were obtained in order to make at least minimal comments regarding employers views.

In all, there were 150 students, 16 faculty, and 16 employers involved in the study of three programs on the North Campus of Miami-Dade Community College.

Results

The tables in the Results section summarize student, faculty, and employer reactions to each of the listed competencies. A detailed list of each of the competencies is contained in the appendix.

The tables are organized so that positive responses and negative responses can be compared to each of the items. The scale of positive to negative ran from 1 through 5 with 1 being the most unfavorable and 5 being the most favorable response. It was decided to delete responses with ratings of 3 and to collapse ratings of 1 and 2 into positive and 4 and 5 into negative responses.

The number of students responding in each case is considerably higher than the number of faculty or employers. The low number of employer ratings is especially limiting with regard to interpretation.

Analysis of Results by Project Program

Accounting

In analyzing the data from these results, the intent was to convey comparisons of perceptions of the extent to which each of the competencies was addressed. Keeping this purpose in mind, and merely giving an overall impression of the high levels of positive/negative responses, it is not surprising that the faculty had the highest percentage of positive responses; students less, and employers considerably more negative responses. There are also some items on which

there are interesting disparities between student and faculty views on whether a particular competency was or was not achieved. Note for competency no. 18, very few students thought they had been taught to prepare an individual tax return whereas seven of the eight faculty members believed that this competency had been achieved. There was only one employer responding to this item so that inferences and comparisons should not be made. However, one of the major contributions of a study of this sort is to have faculty reevaluate their own perceptions and/or assessment tools regarding the extent to which a competency such as preparing an individual tax return is, in fact, achieved when large numbers of students close to graduation from the program believe they have not, in fact, learned this competency. In the reverse situation, it is interesting to note that on item 11, more students thought that they had achieved the competencies inherent in this task than did faculty.

Electronics Curriculum

In replying to competency item 3,"solves mathematical problems related to electronic devices and circuits", none of the four employers who responded thought that this competency was achieved, whereas only 6 percent of the students thought that this was not achieved,

and none of the faculty believed that the competency was not achieved. It would seem that this would be another likely target for further investigation with regard to either differences in operational definitions of the competency under discussion, or resolving these disparities on the substantive issue, assuming that the definitions are similar.

Radio/Television Broadcasting Technology

In this program, there are very few faculty, resulting in 3 persons responding to most items. There were no negative responses from any of the 3 faculty and in virtually all cases for all items, all 3 faculty believed that the competencies listed were, in fact, being sufficiently addressed. The students in the program tended to agree with the faculty with most of the competencies. There were very few who responded negatively to the achievement of the listed compentencies. However, of the employers surveyed, admittedly only a few, there were some who believed that at least a few competencies were not being adequately addressed. For example, with 3 employers responding to item 14, "ability to edit silent and single and double system sound film", 2 of the people responded negatively. By and large, it appears that there is a high level of consistency among responses from the 3 groups in this program.

Overall, the responses tended to be essentially positive from each of the three groups with regard to the achievement of the various competencies listed by the faculty.

Table 1

Student Opinions Concerning the Degree of Effectiveness of the Accounting Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	41	100	16	39.0	22	53.6	3	7.4
2	41	100	12	29.3	24	58.5	5	12.2
3	41	100	16	39.0	20	48.8	5	12.2
4	40	97.6	13	32.5	21	52.5	6	15.0
5	40	97.6	21	52.5	13	32.5	6	15.0
6	39	87.8	7	17.9	22	56.4	10	25.7
7	40	97.6	18	45.0	13	32.5	9	22.5
8	41	100	18	43.9	20	48.8	3	7.4
9	41	100	13	31.7	12	29.3	16	39.0
10	40	97.6	15	37.5	15	37.5	10	25.0
11	41	100	9	22.0	16	39.0	16	39.0
12	41	100	9	22.0	17	41.4	15	36.6
13	41	100	15	36.6	19	46.3	7	17.1
14	41	100	13	31.7	19	46.3	9	22.0
15	41	100	11	26.8	22	53.7	8	19.5
16	41	100	13	31.7	21	51.2	7	17.0
17	40	97.6	14	35.0	15	37.5	11	27.5
18	40	97.6	2	5.0	15	37.5	23	57.5
19	41	100	19	46.3	16	39.0	6	14.4

Table 2

Faculty Opinions Concerning the Degree of Effectiveness of the Accounting Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	8	100	8	100	0	0.0	0	0.0
2	8	100	5	62.5	3	37.5	0	0.0
3	8	100	5	62.5	3	37.5	0	0.0
4	8	100	3	37.5	5	62.5	0	0.0
5	8	100	3	37.5	5	62.5	0	0.0
6	8	100	1	12.5	4	50.0	3	37.5
7	8	100	5	62.5	3	37.5	0	0.0
8	8	100	7	87.5	1	12.5	0	0.0
9	8	100	5	62.5	3	37.5	0	0.0
10	8	100	3	37.5	4	50.0	1	12.5
11	8	100	0	0.0	5	62.5	3	37.5
12	8	100	2	25.0	4	50.0	2	25.0
13	8	100	6	75.0	1	12.5	1	12.5
14	8	100	4	50.0	3	37.5	1	12.5
15	8	100	4	50.0	3	37.5	1	12.5
16	8	100	5	62.5	3	37.5	0	0.0
17	8	100	2	25.0	5	62.5	1	12.5
18	8	100	7	87.5	1	12.5	0	0.0
19	8	100	3	37.5	3	37.5	2	25.0

Table 3

Employers Opinions Concerning the Degree of Effectiveness of the Accounting Curriculum in Providing Necessary Competencies (as Measured by Graduates' on-the-Job Performance)

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Items Respondents	N	% of Items Respondents
1	3	75.0	0	0.0	2	66.7	1	33.3
2	2	50.0	0	0.0	0	0.0	2	100
3	4	100	2	50.0	1	25.0	1	25.0
4	4	100	1	25.0	2	50.0	1	25.0
5	4	100	3	75.0	1	25.0	0	0.0
6	4	100	2	50.0	1	25.0	1	25.0
7	3	75.0	0	0.0	1	33.3	2	66.7
8	4	100	1	25.0	3	75.0	0	0.0
9	2	50.0	0	0.0	0	0.0	2	100
10	2	50.0	0	0.0	1	50.0	1	50.0
11	2	50.0	0	0.0	0	0.0	2	100
12	1	25.0	0	0.0	0	0.0	1	100
13	3	75.0	1	33.3	0	0.0	2	66.7
14	3	75.0	0	0.0	1	33.3	2	66.7
15	2	50.0	0	0.0	0	0.0	2	100
16	3	75.0	0	0.0	1	33.3	2	66.7
17	2	50.0	0	0.0	1	50.0	1	50.0
18	1	25.0	0	0.0	0	0.0	1	100
19	2	50.0	0	0.0	1	50.0	1	50.0

Table 4

Student Opinions Concerning the Degree of Effectiveness of the Electronics Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	63	98.4	19	30.2	32	50.0	12	19.0
2	64	100	28	43.7	29	45.3	7	11.0
3	64	100	35	54.7	25	39.1	4	6.2
4	63	98.4	19	30.2	26	41.3	18	28.5
5	64	100	11	17.2	23	35.9	30	46.9
6	64	100	10	15.6	25	39.1	29	45.3
7	64	100	33	51.6	15	23.4	16	25.0
8	64	100	8	12.5	26	40.6	30	46.9
9	64	100	34	53.1	24	37.5	6	9.4
10	64	100	10	15.6	32	50.0	22	34.4
11	64	100	21	32.8	26	40.6	17	26.6
12	64	100	18	28.1	28	43.7	18	28.1
13	64	100	19	29.7	27	42.2	18	28.1
14	63	98.4	24	38.1	29	46.0	10	15.9

Table 5

Faculty Opinions Concerning the Degree of Effectiveness of the Electronics Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	5	100	2	40.0	2	40.0	1	20.0
2	5	100	4	80.0	1	20.0	0	0.0
3	5	100	3	60.0	2	40.0	0	0.0
4	5	100	3	60.0	0	0.0	2	40.0
5	5	100	1	20.0	2	40.0	2	40.0
6	5	100	0	0.0	2	40.0	3	60.0
7	5	100	3	60.0	2	40.0	0	0.0
8	5	100	0	0.0	2	40.0	3	60.0
9	5	100	4	80.0	1	20.0	0	0.0
10	5	100	1	20.0	3	60.0	1	20.0
11	5	100	2	40.0	3	60.0	0	0.0
12	5	100	0	0.0	2	40.0	3	60.0
13	5	100	0	0.0	4	80.0	1	20.0
14	5	100	1	20.0	3	60.0	1	20.0

Table 6

Employers Opinions Concerning the Degree of Effectiveness of the Electronics Curriculum in Providing Necessary Competencies (as Measured by Graduates' on-the-Job Performance)

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	6	100	3	50.0	2	33.3	1	16.7
2	4	66.7	0	0.0	2	50.0	2	50.0
3	4	66.7	0	0.0	0	0.0	4	100.0
4	6	100	2	33.3	4	66.7	0	0.0
5	6	100	2	33.3	2	33.3	2	33.3
6	5	83.3	2	40.0	3	60.0	0	0.0
7	5	83.3	2	40.0	3	60.0	0	0.0
8	6	100	3	50.0	3	50.0	0	0.0
9	4	66.7	4	100	0	0.0	0	0.0
10	5	83.3	2	40.0	3	60.0	0	0.0
11	6	100	2	33.3	3	50.0	1	16.7
12	3	50.0	1	33.3	2	66.7	0	0.0
13	4	66.7	0	0.0	2	50.0	2	50.0
14	6	100	2	33.3	4	66.7	0	0.0

Table 7

Student Opinions Concerning the Degree of Effectiveness of the Radio/Television Broadcasting Technology Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	46	100	23	50.0	18	39.1	5	10.9
2	46	100	28	60.9	16	34.7	2	4.4
3	46	100	32	69.6	13	28.3	1	2.1
4	46	100	25	54.3	17	36.9	4	8.7
5	46	100	28	60.9	16	34.7	2	4.4
6	46	100	21	45.6	20	43.5	5	10.9
7	46	100	28	60.9	17	36.9	1	2.1
8	46	100	33	71.7	12	26.1	1	2.1
9	46	100	35	76.1	11	23.9	0	0.0
10	46	100	25	54.3	15	32.6	6	13.1
11	46	100	23	50.0	19	41.3	4	8.7
12	46	100	21	45.6	22	47.8	3	6.5
13	45	97.8	17	37.8	26	57.8	2	4.4
14	46	100	8	17.4	30	65.2	8	17.4
15	45	97.8	16	35.6	24	53.3	5	11.1
16	45	97.8	17	37.8	22	48.9	6	13.3
17	45	97.8	17	37.8	24	53.3	4	8.9

Table 8

Faculty Opinions Concerning the Degree of Effectiveness of the Radio/Television Broadcasting Technology Curriculum in Providing Necessary Competencies

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	3	100	3	100	0	0.0	0	0.0
2	3	100	3	100	0	0.0	0	0.0
3	3	100	3	100	0	0.0	0	0.0
4	3	100	3	100	0	0.0	0	0.0
5	3	100	3	100	0	0.0	0	0.0
6	3	100	2	66.7	1	33.3	0	0.0
7	3	100	3	100	0	0.0	0	0.0
8	3	100	3	100	0	0.0	0	0.0
9	3	100	3	100	0	0.0	0	0.0
10	3	100	3	100	0	0.0	0	0.0
11	3	100	3	100	0	0.0	0	0.0
12	3	100	3	100	0	0.0	0	0.0
13	3	100	3	100	0	0.0	0	0.0
14	3	100	3	100	0	0.0	0	0.0
15	3	100	3	100	0	0.0	0	0.0
16	3	100	3	100	0	0.0	0	0.0
17	3	100	3	100	0	0.0	0	0.0

Table 9

Employers Opinions Concerning the Degree of Effectiveness of the Radio/Television Broadcasting Technology Curriculum in Providing Necessary Competencies (as Measured by Graduates' on-the-Job Performance)

Competency	Responses to Item		Positive Responses		Neutral Responses		Negative Responses	
	N	% of Total Respondents	N	% of Item Respondents	N	% of Item Respondents	N	% of Item Respondents
1	5	83.3	3	60.0	2	40.0	0	0.0
2	6	100	3	50.0	2	33.3	1	16.7
3	5	83.3	3	60.0	2	40.0	0	0.0
4	5	83.3	4	80.0	1	20.0	0	0.0
5	4	66.7	2	50.0	2	50.0	0	0.0
6	1	16.7	1	100	0	0.0	0	0.0
7	5	83.3	3	60.0	1	20.0	1	20.0
8	4	66.7	4	100	0	0.0	0	0.0
9	4	66.7	4	100	0	0.0	0	0.0
10	4	66.7	2	50.0	2	50.0	0	0.0
11	2	33.3	0	0.0	2	100	0	0.0
12	4	66.7	2	50.0	2	50.0	0	0.0
13	4	66.7	1	25.0	2	50.0	1	25.0
14	3	50.0	1	33.3	0	0.0	2	66.7
15	3	50.0	2	66.7	0	33.3	0	0.0
16	3	50.0	1	33.0	2	66.7	0	0.0
17	3	50.0	0	0.0	3	100	0	0.0

Summary and Interpretation

This project is best viewed as a pilot study to investigate the development of an appropriate methodology for evaluating curriculum and to provide feedback for decision makers in the area of improvement of curriculum. The results support the idea that comparing perceptions of the 3 groups - students, faculty, and employers on the same series of questions can be a rewarding way to address the question of whether particular competencies have been met. In fact, this process occurs continually in most curriculum areas, especially in the technical programs where feedback from students, faculty, and employers is used as a change agent. The addition of more formalized procedures and methods, and especially consistency with which the questions are asked, can add to the objectivity with regard to the manner in which the feedback is handled.

In the continuing search for improved curriculum, it is essential to balance the immediate needs for revision with longterm evaluations. Cross-sectional studies of this type in which different populations are used can be of most value when used in conjunction with longitudinal studies following the same students over a long period of time. There are disadvantages to each approach, but when the results of each are merged, more insight can be expected than when either or the other approach is used singly.

The particular limitations of this cross-sectional study included such items as the fact that the students who were evaluated by employers did not comprise the same students who evaluated the programs for this project. On a cross-sectional study of this sort this is obviously the case, but it should be highlighted. The weakest link in this entire study is the evaluation by the employer. It is difficult to give employers strict guidelines with regard to evaluation criteria and it is particularly difficult to ask employers to spend the amount of time that would be necessary in order to identify each employee and to determine whether that employee was, in fact, a graduate of the program. In some instances, it is probably assumed by an employer that simply because a student is working in an area, that he has graduated from the same program.

In future studies of this type which are currently being planned by this office, it is intended to contact students just prior to graduation, seeking their help in asking employers to send back information. It is hoped that if the students cooperate, they can alleviate fears of the employer with regard to privacy issues. This approach has its own limitations, not the least of which is that students would then comprise a volunteer group. Nonetheless, by continuing to vary the approaches used, we can hope to get a variety of perspectives on the issues and, more importantly, hope to provide worthwhile data to program managers

so that curriculum issues may be addressed in light of empirical data derived from the perceptions of students, faculty and employers.

Appendix A

Competencies Developed for the Accounting Program

1. Analyze the business transactions of single proprietorships, partnerships, or corporations; journalize and post these transactions.
2. Adjust and close appropriate accounts at the end of a fiscal period for all three types of organizations (single proprietorship, partnership, and corporation).
3. Analyze business transactions for service, mercantile, and manufacturing business; then journalize and post these transactions.
4. Adjust and close appropriate accounts at the end of a fiscal period for service, mercantile, and manufacturing businesses.
5. Prepare statements.
6. Compute needed information and prepare special statements as required, such as changes in financial position and budgets.
7. Use given formulas to compute the figures needed to analyze financial statements such as merchandise inventory turnover or rate of return on assets.
8. Compute and make resulting entries for such items as payroll, bank reconciliation, etc.
9. Compute and interpret the break-even point.
10. Using either the job order or processing system, record entries to transfer from the materials, labor, and factory overhead accounts to work-in-process and finished goods. Also, calculate the per unit cost of goods.
11. Separate and analyze all of the variances required for a standard cost system.
12. Review and evaluate a complete system of internal controls.
13. Audit a general ledger cash account.
14. Audit acquisition and disposition of plant assets.
15. Audit inventories for a mercantile business.
16. Determine the adequacy of the allowance for uncollectible accounts.
17. Determine the reasonableness of financial statements.
18. Prepare an individual tax return.
19. Prepare a tax return for a small un-incorporated business.

Competencies Developed for the Electronics Program

1. Applies electronic theory to circuit repair and analysis.
2. Applies testing procedures for individual components and circuits using electronic test equipment.
3. Solves mathematical problems related to electronic devices and circuits.
4. Replace a defective component in a circuit.
5. Modifies an existing electronic circuit (ie., change its characteristics).
6. Discuss layout and assembly problems with electronic engineers.
7. Assembles experimental circuitry, breadboards, and tests performance. Writes report of test results.
8. Recommends changes in circuitry or installation specifications.
9. Sets up and uses standard test apparatus.
10. Evaluates performance and reliability of production model prototype.
11. Analyzes and interprets test data and specification sheets.
12. Adjusts, calibrates, aligns, and modifies circuitry according to specifications.
13. Writes technical reports.
14. Develops charts, graphs, and schematics.

Competencies Developed for the Radio/Television Broadcasting Technology Program

1. An understanding of the historical development of the electronic media.
2. An understanding of the media's relationship with government and the public.
3. The ability to operate an audio control board and its components.
4. To produce and edit audio tapes.
5. Be able to read, understand and follow a radio program log.
6. Be able to pass the Third Class (Restricted) Radio Operators Test.
7. Be able to prepare a resume and audition tape.
8. Be able to set up a TV studio, then properly light the set.
9. Gain skill in operating a TV camera.
10. Understand the basics of the job technical director (switcher).
11. Be able to write a basic TV script.
12. Understand the basic theories of TV directing.
13. Know the basic fundamentals of writing news for broadcast (as opposed to print).
14. Be able to edit silent and single and double system sound film.
15. Understand lighting for film.
16. Operate silent and sound 16mm cameras.
17. Be able to prepare visuals for TV and film.

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